

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 6 of 17

### **REMARKS/DISCUSSION OF ISSUES**

By this Amendment, Applicant amends claim 4 to correct a minor typographical error.

Claims 1-19 are pending in the application.

Applicant acknowledges the indication that claims 5 and 16-18 define patentable subject matter and would be allowable if rewritten in independent form including all limitations of their respective base claims and any intervening claims.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

### **35 U.S.C. § 103**

The Office Action rejects: claim 1-4, 8, 11 and 13 under 35 U.S.C. § 103 over Hagen et al. U.S. Patent 6,182,030 ("Hagen"); claims 9 and 12 under 35 U.S.C. § 103 over Hagen in view of Chao et al. U.S. Patent 5,204,882 ("Chao"); and claims 6-7, 10, 14-15, and 19 under 35 U.S.C. § 103 over Hagen in view of Van Wie U.S. Patent 6,240,185 ("Van Wie").

Applicant respectfully traverses all of these rejections for at least the following reasons.

#### **Claim 1**

Among other things, the method of claim 1 includes distorting the bitstream of a primary signal by a particular distortion representing a secondary signal.

Applicant respectfully submits that Hagen does not disclose such a feature.

The Office Action states that Hagen discloses in column 2, lines 6-11 and FIG. 1 a composite bit stream made out of two or more separate streams.

So what? This not being what is claimed in claim 1.

The Office Action fairly admits that Hagen does not "clearly" mention the bitstream of the primary signal is distorted (indeed, Applicant respectfully submits that Hagen doesn't disclose or suggest such a thing – "clearly" or otherwise).

However, the Office Action states that "[i]t would have been obvious to a person having ordinary skill in the art at the time the invention was made to clearly point

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 7 of 17

out how the bitstream of the signals (sic) is being distorted since the ability to strip bits from an exiting bit stream while maintaining the ability to reconstruct the speech signal (albeit at a lower accuracy) is an especially useful type of bit rate flexibility" (emphasis added).

Applicant respectfully disagrees. The cited text in Hagen is merely discussing the benefit of providing bit rate flexibility in a digitized speech signal. It has absolutely nothing to do with distorting the bitstream of a primary signal by a particular distortion representing a secondary signal, which is the feature of claim 1.

Also, Applicant respectfully submits that one could not "clearly point out" that which is not present in Hagen in the first place. Hagen does not disclose distorting the bitstream of a primary signal by a particular distortion representing a secondary signal, the Office Action does not cite anything in Hagen which discloses distorting the bitstream of a primary signal by a particular distortion representing a secondary signal, and the Office Action does not state that it would have been obvious to modify Hagen to distort the bitstream of a primary signal by a particular distortion representing a secondary signal, or provide any motivation for such a modification. Whether or not something would have been "clearly obvious to point out" (and here, it would not have been) is not the test for obviousness under 35 U.S.C. § 103. Therefore, the rejection under 35 U.S.C. § 103 is improper and must be withdrawn.

Furthermore, the Office Action states that the motivation for one to supposedly "clearly point out" the features that are completely undisclosed by Hagen would be "because high quality coding of acoustical signals at low bit rates is of pivotal importance to communications systems."

Applicant respectfully submits that this is totally irrelevant to the only two issues here: (1) whether Hagen discloses distorting the bitstream of a primary signal by a particular distortion representing a secondary signal; and (2) whether it would have been obvious to one skilled in the art at the time the invention was made to modify Hagen to distort the bitstream of a primary signal by a particular distortion representing a secondary signal. In response to issue (1), Hagen does not disclose such a feature. In response to issue (2), such a modification of Hagen would not

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 8 of 17

have been obvious, and the Office Action fails to provide any evidence at all to the contrary.

### **Response to Argument**

The Response to Argument section of the FINAL Office Action argues that:

- 1) Hagen teaches that "embedded LPAS coding algorithms provide increased bit rate flexibility at the expense of significantly curtailed coding efficiency;"
- 2) "It is obvious that Hagen teaches distortion of bitstream in order to permit the distortion to be corrected," and
- 3) If the prior art structure is capable of performing the intended use, then it meets the claimed limitations.

In response to the first argument, Applicant respectfully asks: So what? What does any of this have to do with the subject matter of claim 1? Claim 1 neither recites anything about LPAS coding algorithms, bit rate flexibility, nor coding efficiency. However, it **does** very clearly recite distorting the bitstream of a primary signal by a particular distortion representing a secondary signal. It is this feature – and not anything to do with LPAS or coding efficiency – which Applicant submits is not disclosed or suggested anywhere in Hagen, and which Applicant further submits the Office Action fails to address.

In response to the second argument, Applicant does not agree that "Hagen teaches distortion of bitstream in order to permit the distortion to be corrected," but even if, *arguendo*, Hagen did disclose that, that is **not** what is recited in claim 1. Claim 1 does not merely recite that the bitstream of a primary signal is distorted, but instead, claim 1 clearly recites distorting the bitstream of a primary signal **by a particular distortion representing a secondary signal**. Again, it is this feature which Applicant submits is not disclosed or suggested anywhere in Hagen, and which Applicant also submits the Office Action fails to address.

In response to the third argument, Applicant respectfully submits that claim 1 is a **method** claim which does not recite any "intended use" and which cannot be disclosed by any "prior art structure." The Office Action does not state the correct test for patentability of claim 1 over Hagen. Claim 1 discloses a method that is

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 9 of 17

neither disclosed nor suggested by Hagen at least because not in Hagen even remotely suggests distorting the bitstream of a primary signal by a particular distortion representing a secondary signal. Hagen's "structure" is not configured to perform the method of claim 1. But even if Hagen's "structure was somehow capable of performing the method of claim 1, it is well settled that a new use for an old structure is absolutely patentable under 35 U.S.C. §§ 102 and 103.

Accordingly, for at least these reasons, Applicant respectfully submits that claim 1 is patentable over Hagen.

Claims 2-3

Claims 2-3 depend from claim 1 and are deemed patentable for at least the reasons set forth above with respect to claim 1, and for the following additional reasons.

Among other things, in the methods of claims 2 and 3, distorting the bitstream of the primary signal comprises inserting local phase errors in the bitstream of the primary signal. Meanwhile, in the method of claim 3, the absolute value of the phase error is chosen such that it is smaller than the channel clock period of the primary channel.

Applicant respectfully submits that Hagen does not disclose or suggest such features.

The Office Action states that Hagen "provides" encoding of an adaptive equalization operator by means of a bit stream "which may be separable from the bit stream of the primary coding algorithm."

Of course, that is not what is recited in either claim 2 or claim 3. The Office Action make no mention whatsoever of: (1) inserting local phase errors in the bitstream; (2) absolute value of the phase error; (3) or the channel clock period of the primary channel.

It is facially clear that the Office Action has not supported any rejection of claims 2-3 under 35 U.S.C. § 103 over Hagen. Furthermore, Applicant respectfully submits that Hagen does not disclose any of these features.

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 10 of 17

### Response to Argument

The Response to Argument section of the FINAL Office Action completely fails to address these clear deficiencies in the first Office Action, which have already been previously noted by Applicant.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claims 2-3 are patentable over Hagen.

#### Claim 4

Claim 4 depends from claim 1. Chao does not remedy the shortcomings of Hagen with respect to claim 1. Accordingly, claim 4 is deemed patentable for at least the reasons set forth above with respect to claim 1, and for the following additional reasons.

Among other things, in the method of claim 4, low frequency variations are introduced into the channel clock of the primary channel.

Applicant respectfully submits that Hagen and Chao does not disclose or suggest such a feature.

Neither FIG. 5 of Hagen nor the text at col. 8, lines 56-65, discloses or remotely suggests introducing low frequency variations into the channel clock of the primary channel. Indeed, neither the cited text nor FIG. 5 even mention the channel clock!

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 4 is patentable over the prior art.

#### Claims 6-7

Claims 6-7 depend from claim 1. Van Wie does not remedy the shortcomings of Hagen with respect to claim 1. Accordingly, claims 6-7 are deemed patentable for at least the reasons set forth above with respect to claim 1, and for the following additional reasons.

Hagen does not disclose the features specifically recited in claims 6-7. Applicant respectfully traverses the proposed combination of Hagen and Van Wie as totally lacking any proper motivation in the prior art.

Accordingly, for at least these additional reasons, Applicant respectfully

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 11 of 17

submits that claims 6-7 are patentable over the prior art.

Claim 8

Among other things, the apparatus of claim 8 includes distortion means for distorting the bitstream of the primary signal such that the secondary signal is represented by a predetermined distortion.

Applicant respectfully submits that Hagen does not disclose or suggest any apparatus including such distortion means. The Office Action does cite anything in Hagen that discloses or suggests any apparatus including such distortion means.

Accordingly, for at least these reasons, claim 8 is deemed patentable over Hagen.

Furthermore, the Office Action fails to substantively examine claim 8, instead stating that it has limitations "similar to those of claim 1."

Applicant respectfully disagrees.

Claim 1 is a method claim; claim 8 is an apparatus claim. Claim 1 recites various steps in a method; claim 8 recites various components of an apparatus.

Applicant has paid all of the fees required for each and every one of the claims submitted here, and respectfully insist that under the rules of the U.S. Patent Office, Applicant is therefore entitled to a full, fair, and complete examination of each pending claim. The Examiner is respectfully requested to provide some citation to anything in Hagen disclosing or suggesting an apparatus that includes distortion means for distorting the bitstream of the primary signal such that the secondary signal is represented by a predetermined distortion, or else allow claim 8.

Claim 9

Claim 9 depends from depend from claim 8. Chao does not remedy the shortcomings of Hagen with respect to claim 8. Accordingly, claim 9 is deemed patentable for at least the reasons set forth above with respect to claim 8, and for the following additional reasons.

Hagen does not disclose the buffer or encoder specifically recited in claim 9. Fig. 3A of Hagen very clearly does not disclose the buffer or encoder specifically recited in claim 9. Furthermore, Applicant respectfully traverses the proposed

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 12 of 17

combination of Hagen and Chao as totally lacking any proper motivation in the prior art.

#### **Response to Argument**

The Response to Argument section of the FINAL Office Action completely fails to address the clear lack of motivation in the prior art for the proposed combination, which has already been previously noted by Applicant. Lacking any stated motivation for the combination, the rejection is clearly contrary to M.P.E.P. § 2143.01 and should be withdrawn.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 9 is patentable over the prior art.

#### **Claim 10**

Claim 10 is directed to an apparatus for recording a primary signal of a primary channel on a record carrier that includes the apparatus of claim 8.

Van Wie does not remedy the shortcomings of Hagen with respect to claim 8. Accordingly, claim 10 is deemed patentable for at least the reasons set forth above with respect to claim 8, and for the following additional reasons.

Hagen does not disclose an apparatus for recording a primary signal of a primary channel on a record carrier. Applicant respectfully traverses the proposed combination of Hagen and Van Wie as totally lacking any proper motivation in the prior art.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 10 is patentable over the prior art.

#### **Claim 11**

Among other things, the method of claim 11 includes detecting the distortion of a bitstream of a primary signal, and decoding a secondary signal from the distortion.

Applicant respectfully submits that Hagen does not disclose or suggest any method including such features. The Office Action does cite anything in Hagen that discloses or suggests any method including such features.

Accordingly, for at least these reasons, claim 11 is deemed patentable over

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 13 of 17

Hagen.

Furthermore, the Office Action fails to substantively examine claim 11, instead stating that it has limitations "similar to those of claim 1."

Applicant respectfully disagrees.

Claim 1 is directed to a method of embedding a secondary signal of a secondary channel in the bitstream of a primary signal of a primary channel. In clear contrast, claim 11 is directed to a method of detecting a secondary signal of a secondary channel embedded in the bitstream of a primary signal of a primary channel.

Applicant has paid all of the fees required for each and every one of the claims submitted here, and respectfully insist that under the rules of the U.S. Patent Office, Applicant is therefore entitled to a full, fair, and complete examination of each pending claim. The Examiner is respectfully requested to provide some citation to anything in Hagen disclosing or suggesting a method that detects the distortion of a bitstream of a primary signal, and decodes a secondary signal from the distortion, or else allow claim 11.

Claim 12

Claim 12 depends from claim 11. Chao does not remedy the shortcomings of Hagen with respect to claim 11. Accordingly, claim 12 is deemed patentable for at least the reasons set forth above with respect to claim 11, and for the following additional reasons.

Hagen does not disclose detecting distortion in a phase lock loop. The Office Action cites nothing in Chao that supposedly discloses detecting distortion in a phase lock loop. Furthermore, Applicant respectfully traverses the proposed combination of Hagen and Chao as totally lacking any proper motivation in the prior art.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 12 is patentable over the prior art.

Furthermore, the Office Action fails to substantively examine claim 12, instead stating that it has limitations "similar to those of claim 11."

Applicant respectfully disagrees.

Atty. Docket No. NL-010104



Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 14 of 17

Claim 12 includes detecting the distortion in a phase locked loop circuit.  
Claim 11 contains no such limitation.

Further showing how preposterous is the statement in the FINAL Office Action that "[t]his claim has limitations that is (sic) similar to claim 11," is the fact that the Office Action rejected claim 11 over Hagen but somehow – inexplicably – found it necessary to add the Chao reference to Hagen in order to reject claim 12.

Applicant has paid all of the fees required for each and every one of the claims submitted here, and respectfully insist that under the rules of the U.S. Patent Office, Applicant is therefore entitled to a full, fair, and complete examination of each pending claim. The Examiner is respectfully requested to provide some citation to anything in Hagen and/or Chao disclosing or suggesting detecting the distortion in a phase locked loop circuit, or else allow claim 12.

#### Response to Argument

The Response to Argument section of the FINAL Office Action completely fails to address these clear deficiencies in the first Office Action, which have already been previously noted by Applicant.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 12 is patentable over the prior art.

#### Claim 13

Among other things, the apparatus of claim 13 includes detection means for detecting the distortion of the bitstream, and decoding means for decoding the secondary signal from the distortion.

Applicant respectfully submits that Hagen does not disclose or suggest any apparatus including such detection means or decoding means. The Office Action does cite anything in Hagen that discloses or suggests any apparatus including such detection means or decoding means.

Accordingly, for at least these reasons, claim 13 is deemed patentable over Hagen.

Furthermore, the Office Action fails to substantively examine claim 13, instead

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 15 of 17

stating that it has limitations "similar to those of claim 1."

Applicant respectfully disagrees.

Claim 1 is a method claim; claim 13 is an apparatus claim. Claim 1 recites various steps in a method; claim 13 recites various components of an apparatus. Claim 1 is directed to a method of embedding a secondary signal of a secondary channel in the bitstream of a primary signal of a primary channel; claim 13 is directed to an apparatus for detecting a secondary signal of a secondary channel embedded in the bitstream of a primary signal of a primary channel.

Applicant has paid all of the fees required for each and every one of the claims submitted here, and respectfully insist that under the rules of the U.S. Patent Office, Applicant is therefore entitled to a full, fair, and complete examination of each pending claim. The Examiner is respectfully requested to provide some citation to anything in Hagen disclosing or suggesting an apparatus that includes distortion means for distorting the bitstream of the primary signal such that the secondary signal is represented by a predetermined distortion, or else allow claim 13.

#### Response to Argument

The Response to Argument section of the FINAL Office Action completely fails to address these clear deficiencies in the first Office Action, which have already been previously noted by Applicant.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 13 is patentable over the prior art.

#### Claim 14

Claim 14 is directed to apparatus for replaying data stored on a record carrier that includes the apparatus of claim 13.

Van Wie does not remedy the shortcomings of Hagen with respect to claim 13. Accordingly, claim 14 is deemed patentable for at least the reasons set forth above with respect to claim 13, and for the following additional reasons.

Hagen does not disclose an apparatus for replaying data stored on a record carrier. Applicant respectfully traverses the proposed combination of Hagen and Van

Atty. Docket No. NL-010104

Appl. No. 10/078,975  
Amendment and/or Response  
Reply to Office action of 28 March 2006

Page 16 of 17

Wie as totally lacking any proper motivation in the prior art.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 14 is patentable over the prior art.

Claim 15

Among other things, in the data carrier of claim 15, the bitstream of the primary signal is distorted before being stored on the data carrier such that a secondary signal is represented by a predetermined distortion.

Applicant respectfully submits that Hagen does not disclose or suggest a data carrier. Also, Hagen does not disclose or suggest distorting the bitstream of a primary signal before storing the primary signal on the data carrier such that a secondary signal is represented by a predetermined distortion. The Office Action does cite anything in Van Wie that discloses or suggests distorting the bitstream of a primary signal before storing the primary signal on the data carrier such that a secondary signal is represented by a predetermined distortion. Therefore, no combination of Hagen and Van Wie could produce the data carrier of claim 15. Applicant respectfully traverses the proposed combination of Hagen and Van Wie as totally lacking any proper motivation in the prior art.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claim 15 is patentable over the prior art.

Claim 19

Claim 19 depends from claim 6 and is therefore deemed patentable for at least the reasons set forth above with respect to claim 6.

**CONCLUSION**

In view of the foregoing explanations, Applicant respectfully requests that the Examiner reconsider and reexamine the present application, allow claims 1-19 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and

Atty. Docket No. NL-010104

**Appl. No. 10/078,975**  
**Amendment and/or Response**  
**Reply to Office action of 28 March 2006**

**Page 17 of 17**

future replies to charge payment or credit any overpayment (except for the issue fee) to Deposit Account No. 50-0238 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Respectfully submitted,

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Date: 30 May 2006

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Atty. Docket No. NL-010104